

Professional Propulsion Systems

ID:0065

System Specifications



8.36 Kg

Maximal Thrust



28"

Propeller Diameter



44.4 V

Voltage



493 g

Mass

Motor

Name:	EC 87 flat UAV
Part number:	668415
Manufacturer:	Maxon
KV [RPM/V]:	144
Mass [g]:	309
Max continuous Current [A]:	23.6
Max peak Current [A]:	48
Contact:	aerospace@maxongroup.com

ESC

Name:	UAV-ESC 52/30
Part number:	654541
Manufacturer:	Maxon
Mass [g]:	102
Max continuous Current [A]:	30
Max peak Current [A]:	90
Voltage [V]:	9-52.2
Contact:	aerospace@maxongroup.com

Propeller

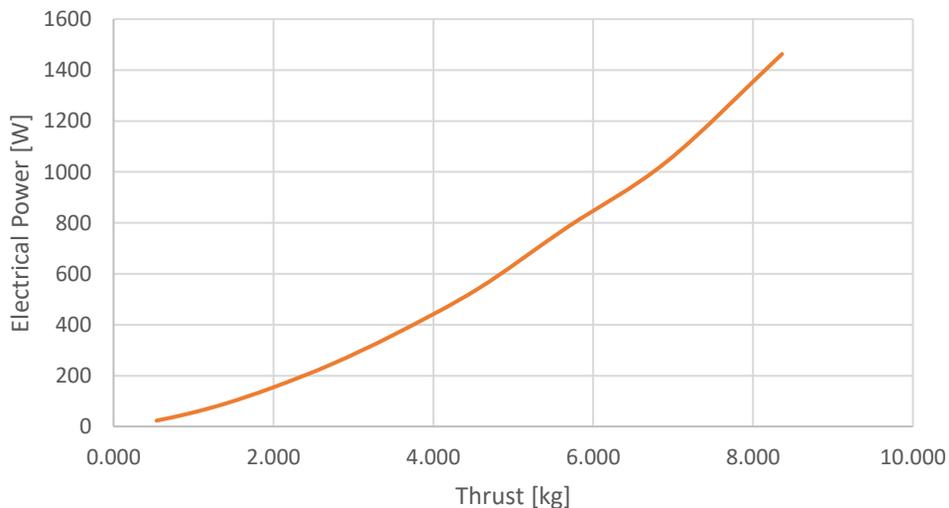
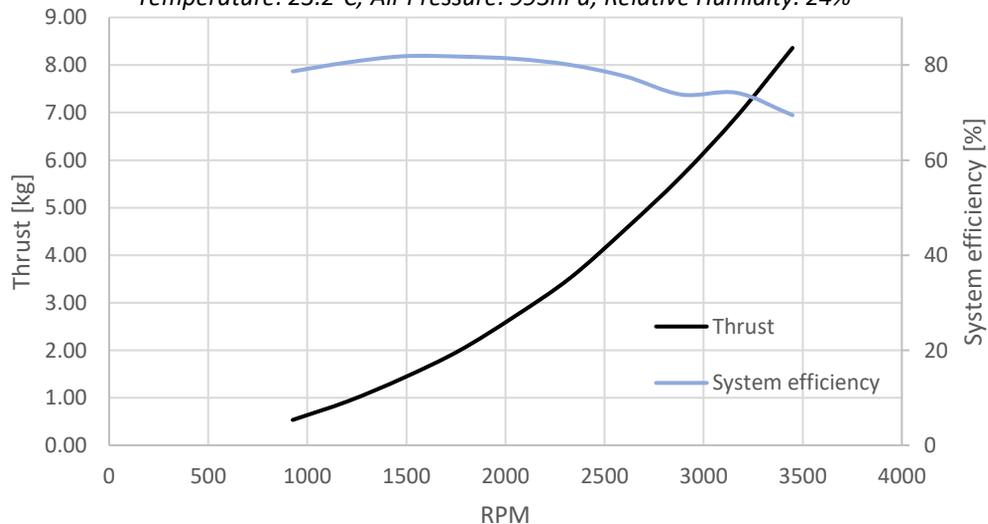
Name:	28x9.4
Manufacturer:	Mejzlik
Diameter ["]:	28
Pitch ["]:	9.4
Mass [g]:	82
Contact:	info@mejzlik.eu

Measurements

ID 0065

Throttle [%] ^[1]	Rotational Speed [RPM]	Thrust [kg]	Torque [Nm]	Voltage [V]	Current [A]	Mechanical Power [W]	Electrical Power [W]	System Efficiency [%] ^[2]
20	927	0.54	0.19	44.5	0.5	18.6	23.6	78.7
26	1207	0.93	0.32	44.5	1.1	40.8	50.7	80.6
31	1487	1.43	0.49	44.5	2.1	76.1	93.0	81.9
36	1768	2.00	0.68	44.5	3.5	126.0	154.1	81.8
42	2048	2.72	0.92	44.5	5.5	198.2	243.8	81.3
47	2328	3.53	1.20	44.5	8.2	291.5	364.3	80.0
52	2608	4.56	1.54	44.4	12.2	419.9	541.2	77.6
58	2888	5.67	1.90	44.4	17.6	576.1	780.7	73.8
63	3168	6.93	2.33	44.3	23.5	772.9	1042.4	74.2
68	3449	8.36	2.81	44.2	33.1	1016.5	1463.3	69.5

Temperature: 23.2°C, Air Pressure: 993hPa, Relative Humidity: 24%



^[1]Depends on Maxon ESC parameter settings. Throttle to RPM ratio can be configured individually and does not necessarily correspond to PWM duty cycle.

^[2]Includes motor efficiency, controller efficiency, wire and connectors losses.